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Investigating the demographic and attitudinal predictors of rape myth acceptance in U.K. Police officers: developing an evidence-base for training and professional development

ABSTRACT

Efforts to understand rape myth acceptance (RMA) as a cognitive framework in police, unifying key cognitive/attitudinal and demographic factors into one coherent model, are lacking. Using a cross-sectional survey design, predictors of RMA were assessed by linear hierarchical regression, including demographic (age, length of service, gender, experience of specialist rape investigation training) and attitudinal factors (hostility towards women, sexist attitudes, and explicit power/sex beliefs) among officers from a large U.K. police force (N = 912). The final model explained 44% of variance in RMA. Gender and previous specialist training significantly predicted RMA, but to a much lesser extent than attitudinal variables, which explain 42% of RMA variance. Only specialist rape investigation training remained significant when attitudinal variables were added. The greater contribution from attitudinal variables suggests that efforts to address RMA in officers must consider the broader attitudinal structures underpinning RMA. Findings highlight implications for evidence-based training for rape investigators.

Despite increased interest in the existence, levels, and correlates of negative attitudes towards rape since the 1970s, the process of rape investigation is still plagued by myriad issues. Such issues are characterised both empirically, for example through severe levels of case attrition (Brown, 2011; Campbell et al., 2014; CPS, 2013, 2015; Grace, Lloyd, & Smith, 1992; Hester, 2015; HMIC, 2014; HMIC & HMCPSI, 2007; Hohl & Stanko, 2015; Home office and Ministry of Justice, 2013; Kelly, Lovett, & Regan, 2005; Lonsway & Archambault, 2012; Lovett & Kelly, 2009; Shaw, Campbell, Cain, & Feeney, 2016; Stanko & Williams, 2009), and experientially, as demonstrated by the profound levels of trauma and negative contact reported by sexual assault survivors when engaging with law enforcement (Campbell, 2006; Chen & Ullman, 2010; Jordan, 2001; Rich & Seffrin, 2012; Temkin & Krahé, 2008; Ullman & Townsend, 2007; Venema, 2016a). Such issues are most strongly characterised by the high levels of 'secondary victimisation' cited (Alderden & Ullman, 2012; Campbell, Wasco, Ahrens, Seffl, & Barnes, 2001) including 'victim blaming

attitudes, behaviours, and practices engaged in by service providers, which further the rape event, resulting in additional trauma' (Campbell et al., 2001, p. 1240).

In attempting to explain the issues surrounding rape cases, police officers have been subject to substantial scrutiny, due to the pivotal part they play within the investigative process, and in affecting the progression of cases through the criminal justice system. For example, it is maintained that police officers act as gatekeepers to this system (Kerstetter, 1990; Sleath & Bull, 2015); have a key role in case progression (Spohn & Tellis, 2012); have significant room for discretion in decision-making (Page, 2008b; Venema, 2016b); and act as crucial determinants of the responses, experiences, and level of care that victims receive (DuMont, Miller, & Myhr, 2003; Lonsway, Welch, & Fitzgerald, 2001; Sleath & Bull, 2015). This is echoed by Shaw et al. (2016) who argue that officers hold the key responsibility of bridging investigation and prosecution, and Hohl and Stanko (2015), who discuss the dual role of officers of a) investigating the complaint and b) keeping the victim engaged in the criminal justice process. Police officers therefore occupy a position of unique responsibility in rape investigations, and it is further argued that such a unique role is susceptible to considerable personal bias (O'Keeffe, Brown, & Lyons, 2009; Venema, 2016a). Principally, that negative beliefs or myths about rape cases are likely to significantly impact police officer judgments, responses to victims, and progression of cases (Sleath & Bull, 2012, 2015, 2017).

The Crown Prosecution Service (CPS) defines a rape myth as 'a commonly held belief, idea or explanation that is not true', further stating that: 'They attempt to explain events, like rape and abuse, in ways that fit with our preconceived ideas about the world – they arise from and reinforce our prejudices and stereotypes' (CPS, 2015, p. 1). The coalescence of such myths can be seen in the 'real rape stereotype' (i.e. the belief that rape tends to happen suddenly, at night, with considerable aggression, and with clear evidence of resistance; Estrich, 1987; Horvath & Brown, 2009). Rape myth acceptance (RMA) (i.e. the extent to which an individual subscribes to such beliefs) has been examined to some extent in police officers in an attempt to understand the possible impact of such attitudes on their judgements, decision making, and behaviour, and to offer attempts at improvement in this regard. However, whilst studies have provided valuable evidence on officers' descriptive accounts of investigation, levels of rape myth acceptance, and related judgements (Sleath & Bull, 2017), interventions designed to challenge negative attitudes and related behaviours demonstrate low levels of efficacy (e.g. Lonsway et al., 2001). The authors of this article argue that this may be due, in part, to the distinct lack of research examining how rape myth acceptance fits within a broader cognitive framework, operating in relation to both attitudinal and demographic factors. Such inquiry would provide important avenues for improvement in officers' interactions with victims (e.g. through training programmes and education), particularly as officers may be informed by attitudes that are reflective of broader constructs which may contribute to the development and maintenance of these beliefs (Temkin & Krahé, 2008). The present study, therefore, examines the predictive relationship between attitudes representative of hostility towards women, sexism, and the relationship between power and sex whilst controlling for demographic variables such as officer gender, years of service and presence/absence of previous specialist rape investigation training.

Rape myth acceptance in police officers

The literature examining officers' acceptance and use of rape myths is summarised in Sleath and Bull's (2017) systematic review of police perceptions and case decision-making. They conclude that studies generally highlight that officers exhibit low levels of rape myth acceptance overall (e.g. Mennicke, Anderson, Oehme, & Kennedy, 2014). Additionally, studies comparing police officers to other populations, such as undergraduate students, find that overall levels of RMA do not significantly differ between groups, both exhibiting low levels of acceptance (Sleath & Bull, 2017). Examination of specific myths highlights that police officers in the U.K. tend to subscribe to 'she lied' myths to a greater extent than psychology and law students, while endorsing 'she asked for it' and 'he didn't mean to' myths to a lesser extent (Sleath & Bull, 2015). Additionally, endorsement of specific myths, even when general rape myth acceptance is low, has been noted (Page, 2007, 2008a, 2008b, 2010). For example, whilst officers in the U.S. agreed that 'any woman can be raped', 20% suggested that provocatively dressed women are inviting sex and that any victim can resist a rape if they want to (22.7%), thereby violating the broader notion to which they had previously agreed (Page, 2007).

The relationships between various demographic factors and rape myth acceptance have also been subject to investigation in officers. Page (2007, 2008b) demonstrated that male officers showed higher levels of rape myth acceptance than female officers, a finding mirrored in student and general populations (Gerger, Kley, Bohner, & Siebler, 2007; Muir, Lonsway, & Payne, 1996; Suarez & Gadalla, 2010; Whatley, 1996). RMA in male officers is likely promoted by the organisational culture within which officers operate; one which is characterised by an underpinning culture of idealised hegemonic masculinity (Connell, 2002; Page, 2007), a form of masculinity venerating dominance, aggression, heterosexuality, and a lack of emotion (Connell, 2002). In contrast, both age and years as a serving police officer demonstrate non-significant relationships with RMA (Suarez & Gadalla, 2010), suggesting that continued exposure to such 'cultures' does not significantly impact on subscription to said negative beliefs. Overall, it is fair to suggest that whilst some demographic and individual variations exist, and though evidence indicates generally low levels of RMA in police, a significant minority of officers agree with negative statements about rape and its victims, and that police officers are not significantly different to other populations in their overall levels of RMA.

Rape myths and investigative decision making

Despite generally low levels of rape myth acceptance in officers, the influence of such extra-legal factors (i.e. peripheral information not directly associated with the transgression of a law) on police officer decision making in rape cases has been subject to increasing scrutiny, with good reason (Alderden & Ullman, 2012; Hohl & Stanko, 2015; Spohn, White, & Tellis, 2014). For example, studies demonstrate that officers identify and use a wide variety of case factors in determining case legitimacy, many of which are built directly on myths about rape (Venema, 2016b). Such myths also influence officers' perceptions of sexual assault survivors (Campbell & Johnson, 1997; Feldman-Summers & Palmer, 1980; Ullman & Townsend, 2007), particularly perceived victim credibility (Brownmiller, 1975; Venema, 2016a). For example, victims are expected to be sober (Sims, Noel, & Maisto,

2007), and perpetrators are expected to be unknown to the victim (Felson & Pare, 2008). Subsequently, when such expectations are violated, there is an associated impact on levels of belief, victim blame, and perpetrator exoneration, as well as perceived authenticity of the claim, as officers evaluate reports of rape against their predetermined ideas of what rape should look like (Hazelwood & Burgess, 1995). Indeed, extra-legal factors are often present in officers' definitions of rape cases (Campbell & Johnson, 1997; Hazelwood & Burgess, 1995; Mennicke et al., 2014), and several studies have demonstrated that when rape-myth associated information is present, officers are likely to make negative judgements regarding victim and perpetrator responsibility, as well as rape authenticity (Goodman-Delahunty & Graham, 2011; Hine & Murphy, 2017; Lee, Lee, & Lee, 2012; Schuller & Stewart, 2000; Sleath & Bull, 2012; Venema, 2016b). Such research supports the potential influence of individual attitudinal variability on officers' judgements and decision-making in rape cases (Edwards, Turchik, Dardis, Reynolds, & Gidycz, 2011; Kelly, 2010).

To further complicate decision-making processes, Frohmann (1997) describes a 'downstream orientation' (p. 535) within the criminal justice system, in which officers and prosecutors build cases to meet thresholds for reasonable doubt standards (Hohl & Stanko, 2015; Martin, 2005) and, in doing so, consider the prospective opinions of the judge, jury, and defence when building cases. This is supported by Spohn et al. (2014), who suggest that officers suffer from an anticipatory bias, considering the prosecutor's responses when investigating (Spohn et al., 2014; Venema, 2016b), thus removing some objectivity from the evidence-gathering process. This is contextualised by Munro and Kelly (2009), who state that the cycle of attrition is perpetuated by performance targets and resourcing issues within policing and that these limitations force police officers and prosecutors into only advancing cases they believe to have a realistic chance of uptake. To do so, there is a need to operate using schematic processing, based on a 'repertoire of knowledge' (Frohmann, 1991, p. 217), and Hohl and Stanko (2015) argue that officers are therefore required to rely on rape myths and the 'real rape' stereotype in such instances. This is summarised by Temkin and Krahé (2008), who suggest that the evidence gathering process is often not a normative, objective exercise in fact-finding, but rather one that relies heavily on cognitive heuristics, providing substantial scope for the introduction of beliefs, attitudes, and stereotypes into the judgements that officers make.

Changing police attitudes – intervention and specialist training

In an attempt to address the negative attitudes and behaviours of police officers towards rape victims, a limited number of studies have attempted intervention, with mixed results. Lonsway et al. (2001) produced one of the first comprehensive attempts at officer education, by delivering a modular training programme to police recruits covering a) the Illinois Criminal Sexual Assault Act (60 min), b) Dynamic and preliminary investigation of sexual assault (90 min), and c) Sexual assault impact and interview (60 min). All elements included the exploration and dispelling of rape myths and other misconceptions. When officers were then assessed in comparison to a control group who received basic training, only behavioural, but not attitudinal or cognitive improvements were found (Lonsway et al., 2001). Muram, Hellman, and Cassinello (1995) conducted a similar, although less extensive intervention with new recruits. After 482 officers from the Memphis Police Academy completed a measure of rape myth acceptance, a follow-up lecture emphasising

appropriate attitudes towards rape was delivered. However, when the measure was re-administered, no significant difference in attitudes was found.

Such findings are mirrored by research conducted in the United Kingdom evaluating differences between officers that have already received specialist rape investigation training and those who have not. Sleath and Bull (2012) compared 'Specially Trained Officers' (STOS)/ 'Sexual Offences Investigative Techniques' (SOIT) officers and non-specialist officers on measures of rape myth acceptance and victim responsibility, again finding no differences. This is supported by work by Goodman-Delahunty and Graham (2011), which found no differences in judgements of responsibility as a function of victim intoxication and attire between specialist and non-specialist officers. This is further demonstrated by research investigating the impact of specialised prosecution units in the U.S., as prosecutors' charging decisions and predictors of charging are similar in areas with and without such units, with perceived victim credibility remaining a focal concern for officers in both jurisdictions (Beichner & Spohn, 2005).

Some studies find more positive outcomes, such as Lee et al.'s (2012) evaluation of rape myth acceptance in male South Korean police officers, which found those who had attended a sexual assault educational programme were less likely to endorse rape-supportive attributions in rape scenarios. In addition, a more recent evaluation of specialist training delivered to officers from Victoria Police Service in Australia, again, showed more positive effects on officer attitudes (Darwinkel, Powell, & Tidmarsh, 2013). This 4-week programme included modules on understanding the victim, understanding the offender, case examples, and interview theory and practice, and officers who attended showed greater confidence in case-authorisation, and lower victim responsibility ratings in post-test measures. Importantly, all of the modules on this programme explored the wider context of rape as a crime, following the 'Whole Story' approach (Tidmarsh, Powell, & Darwinkel, 2012), and placing emphasis on the context within which rape occurs, the relationship between victim and perpetrator, and the numerous beliefs surrounding such crimes. Taken together, the limited research evaluating training programmes which aim to educate and train officers in the area of sexual offences suggests that, as with college samples (see Anderson & Whiston, 2005 for review), such approaches are largely ineffective at changing either attitudes or behaviours. This ineffectiveness may be, in part, due to the overly narrow focus of most interventions, in that they seek to address and challenge rape myths in isolation, without considering the broader context of such beliefs.

Attitudes related to rape myth acceptance

It is increasingly acknowledged that rape myths do not exist in isolation, but rather exist within a broader framework of attitudes (Roze & Koss, 2001; Süssenbach & Bohner, 2011; Temkin & Krahé, 2008). Indeed, various attitudinal correlates of rape myth acceptance have been highlighted, with sociocultural attitudes, such as ageism, classism, racism, homophobia, and religious intolerance all demonstrating strong relation to RMA (Aosved & Long, 2006; Suarez & Gadalla, 2010). Attitudinal systems related to gender and sexuality have also been shown to have a significant relationship to RMA. For example, sexual aggression, male dominance, subscription to traditional gender-role beliefs, and hostile/aggressive attitudes towards women demonstrate a strong, positive association (Aosved & Long, 2006; Forbes, Adams-Curtis, & White, 2004; Lonsway & Fitzgerald, 1994, 1995; Suarez &

Gadalla, 2010). Anderson, Cooper, and Okamura (1997) further note that sexual aggression, not sexual promiscuity, was related to RMA, with male pathology and psychopathy also providing no predictive validity. These findings suggest that hostility in general is not predictive of subscription to rape myths, but rather levels of hostility specifically directed towards women. Additionally, ambivalent forms of sexism, representing an ideology composed of both 'hostile' and 'benevolent' prejudices toward women (Glick & Fiske, 1996), are strongly related to RMA. Hostile sexism is composed of antagonistic attitudes towards women, who are often viewed as trying to control men through feminist ideology or sexual seduction (Abrams, Viki, Masser, & Bohner, 2003; Chapleau, Oswald, & Russell, 2007; Glick & Fiske, 1996), while benevolent sexism may be conceptualised as sexism where women are stereotyped as affectionate, delicate, and sensitive, including broader chivalrous beliefs and attitudes, which ultimately express power and dominance over a weaker group (Glick et al., 2000). Both demonstrate a significant predictive association with RMA, including greater victim minimising attitudes, incident minimisation, and less certainty surrounding the authenticity of a rape claim (Yamawaki, Darby, & Queiroz, 2007). Sexism, at least in part, seems to play an important role in perpetuating and informing RMA itself.

Other dominance-based beliefs are also related to RMA. For example, Süssenbach and Bohner (2011) demonstrated that individuals with stronger preferences for hierarchy within the social order (otherwise known as Social Dominance Orientation or SDO) demonstrated higher RMA. Furthermore, when examining the relationship between dominance-based and sexual belief systems, Bargh, Raymond, Pryor, and Strack (1995) found a significant mental association between the concepts of power and sex in men who demonstrated greater tendencies towards sexual aggression and sexual harassment. Indeed, Chapleau and Oswald (2010) highlight that subscription to a belief in the relationship between power and sex significantly predicts subscription to rape myths, which in turn predicts proclivity to commit rape. While their work is not without limitations (e.g. the white, male, college sample), their findings support the notion that rape myths are part of a learned system, where consensual sex is associated with power, that may include socialised gender roles, sexual victimisation, and media input (Zurbriggen, 2000).

The present study

The research presented above supports the notion that rape myth acceptance develops and is maintained as part of a broader cognitive framework. However, at present, no systematic examination of these attitudes in police officers, or their relationship to RMA, has occurred. This is a crucial line of inquiry, as understanding the extent to which such factors are predictive of RMA in policing populations could provide a critical evidence base for the effective development of training programmes to address such attitudes (Chapleau & Oswald, 2010). Such an aim is particularly important when considering the role officers have in response to the crime, as well as the service that victims will receive (Sleath & Bull, 2012) and the impact of negative attitudes on interactions with victims and case trajectories (Brownmiller, 1975; Campbell & Johnson, 1997; Feldman-Summers & Palmer, 1980; Rich & Seffrin, 2012; Ullman & Townsend, 2007; Venema, 2016a). The present study therefore examines the predictive relationship between several demographic (officer gender, age, years of service, presence/absence of specialist training) and

attitudinal (hostility towards women, ambivalent sexism – hostile and benevolent, the relationship between power and sex) variables and rape myth acceptance in a large U.K. police sample.

Method

Design

This study adopted a cross-sectional survey design to examine the extent to which rape myth acceptance (RMA) was predicted by several demographic and attitudinal factors. Four demographic factors were included as predictor variables: officer gender, officer age, years of service, and officer training (i.e. the presence or absence of Sexual Offences Investigation Techniques (SOIT) training at some point in their career). These variables were introduced in block 1 of the overall model and acted as covariates. Four attitudinal predictor variables were introduced in block 2: hostility towards women, ambivalent sexism (hostile), ambivalent sexism (benevolent), and the relationship between power and sex. The outcome variable was the level of RMA.

Participants

Participants were 912 police officers (min = 19 years of age, max = 63 years of age, $M = 37.79$ years, $SD = 9.42$, 584 male and 328 female participants) from the Metropolitan Police Service (MPS) in London, United Kingdom. Officers had a broad range of service length (min = 3 months, max 39 years, $M = 11.44$ years, $SD = 8.27$), and a variety of ranks were represented in the data (64.8% Constables, 18.1% Sergeants, 4.8% Inspector, with the remainder of the sample accounted for by ranks ranging from Police Community Support Officer to Chief Superintendent). Participants were from a variety of ethnic backgrounds, although most were white (84%). Finally, a total of 112 (12.3%) officers had received Sex Offences Investigation Techniques (SOIT) training at some point in their career. This sample is largely representative of both the Metropolitan Police Service, as well as the larger policing population of England and Wales (Office for National Statistics, 2015).

Materials

All items were presented as a randomised battery using the online survey platform, Qualtrics. For each scale, individual items were averaged to provide participant's overall scores.

Hostility towards women

Hostility towards women was measured using a modified version of Check, Malamuth, Elias, and Barton's (1985) original Hostility Towards Women Scale by Lonsway and Fitzgerald (1995). The modification created a 10-question version of the scale that could be distributed to both male and female participants. Example questions include: 'I feel that many times women flirt with men just to tease them or hurt them' and 'Sometimes (other) women bother me just by being around'. Participants gave answers on a 7-point Likert scale ranging from 'strongly disagree' to 'strongly agree'. Cronbach's alpha computed in

this study identified a reliability test score of .82, consistent with previous reliability analysis (.78) (Dang & Gorzalka, 2015).

Ambivalent sexism

Ambivalent sexism was measured by Glick and Fiske's (1996) Ambivalent Sexism Inventory (ASI). This two-factored scale is comprised of 22 questions accessing both hostile and benevolent sexism, including: 'Feminists are making entirely reasonable demands of men' (hostile – reverse coded) and 'Men should be willing to sacrifice their own wellbeing in order to provide financially for the women in their lives' (benevolent). Participants answered on a 7-point Likert scale ranging from 'strongly disagree' to 'strongly agree'. The ASI achieved a Cronbach's alpha level of .84 in the present study (compared to .90 in Glick & Fiske, 1996).

Relationship between power and sex

The explicit power-sex questionnaire (Chapleau & Oswald, 2010) measured participant's explicit associations between power and sex through the use of 11 questions, including: 'During sex, one person is typically "in charge" of the other' and 'Having sex means gaining possession of someone else's body'. Again, participants answered on a 7-point Likert scale ranging from 'strongly disagree' to 'strongly agree'. Reliability analysis by Chapleau and Oswald (2010) generated a Cronbach's alpha coefficient of .83; with the present study generating a Cronbach's alpha of .87.

Rape myth acceptance

The Acceptance of Modern Myths About Sexual Aggression (AMMSA) scale (Gerger et al., 2007) provided a measure of rape myth acceptance and acted as the outcome variable in this study. Participants answered 30 questions, using a Likert scale ranging from 'strongly disagree' to 'strongly agree'. Examples include 'When it comes to sexual contacts, women expect men to take the lead' and 'If a woman invites a man to her home for a cup of coffee after a night out this means that she wants to have sex'. This measure was selected as it overcomes many of the pitfalls associated with historical measures of rape myth acceptance (e.g. Rape Myth Acceptance Scale – RMAS; Burt, 1980; Attitudes Towards Rape Scale – ATR; Field, 1978; Illinois Rape Myth Acceptance Scale – IRMAS; Payne, Lonsway, & Fitzgerald, 1999), including: improving on the length and complexity of items; avoiding the use of multiple concepts in individual items undermining reliability and validity; use of valenced questions and colloquial language; lack of floor effects and issues of skewness; and questions designed to address more modern conceptualisations of sexism and sexist beliefs (Bohner, Eyssel, Pina, Siebler, & Viki, 2009; Gerger et al., 2007; Hinck & Thomas, 1999; Payne et al., 1999). The AMMSA achieves excellent reliability scores, with a Cronbach's alpha level of .91 in the present study, in keeping with previous levels of .92 (Gerger et al., 2007).

Procedure

Participants were recruited through a gatekeeper at the MPS training wing. The link to the questionnaire battery was emailed to the professional email accounts of police officers in the MPS (approximately 33,600 in total) inviting them to take part in a study exploring

'attitudes relating to sexual violence'. Officers were only able to complete the battery on an MPS computer, providing a semi-controlled environment for participants. Significant attrition and non-uptake was anticipated by both MPS collaborators and the research team, largely due to the operational time constraints experienced by officers. The final sample of 912 officers (approx. 2.7% of the population) consisted of those who completed the questionnaire battery in full.

The online battery opened with a statement about the nature of the questions and purpose of the study and made participants aware of their right to withdraw at any time, without explanation. It was also made clear to participants that taking part was entirely voluntary, that data would not be available to any MPS personnel, participation or non-participation would not have any impact on their position or standing within MPS, and that results could not be traced or fed back to any other personnel within the organisation. Considering the sensitive nature of the study, it was strongly emphasised that results were completely anonymous and confidential and that only members of the research team had access to the data. If a participant then agreed to take part, they were presented with the randomised battery of questionnaires. Instructions accompanied each questionnaire. Upon completion, a debriefing screen was provided, including the contact details of the researchers.

Results

Descriptive statistics in table one suggest that mean hostility toward women was not particularly high among this sample ($M = 2.46$) given the 7-point scale. Most previous studies have summed scores of HTW, generating different scoring so for purposes of comparison, this study generated a summed mean of 25.27. Compared to Forbes et al. (2004), whose study examined university-aged students, generated mean scores of 33.09 for male and 30.81 for female participants.

Hostile ambivalent sexism generated a mean of 2.67 in the present sample, this value is roughly in line with the male participants assessed by Glick and Fiske's (1996) original work ($M = 2.49$), and slightly higher than the female participants ($M = 1.49$). Using the same 22-item scale, benevolent ambivalent sexism demonstrated a slightly different pattern, with the present study ($M = 2.96$) being slightly higher on average than the equivalent male participant mean in the original work ($M = 2.58$) and higher still than the female sample ($M = 2.21$).

Finally, in assessing the association between power and sex, the present sample ($M = 1.33$) was roughly in line with that found by Chapleau and Oswald (2010) ($M = 1.53$) (Table 1).

Encouragingly, the mean AMMSA score for participants ($M = 2.7$) was considerably lower than the reported mean among English participants in the original English validation study ($M = 3.60$) (Gerger et al., 2007). Further examination of the outcome variable by item, noted in Table 2, demonstrates that some specific items within the scale generated higher scores than this overall average, specifically, those items which scored a mean of greater than 3 include: when it comes to sexual contacts, women usually expect men to take the lead ($M = 3.2$); It is a biological necessity for men to release sexual pressure from time to time ($M = 3.02$); after a rape, women nowadays receive ample support ($M = 3.72$); As long as they don't go too far, suggestive remarks and allusions simply tell a woman that she is attractive ($M =$

Table 1. Descriptive statistics, N = 912.

	M(SD)	Range
Dependent Variable		
AMMSA	2.70(.78)	1–5.30 ^a
Predictors		
HTWS	2.46(.82)	1–5 ^a
ASI Hostile	2.67(.86)	1–5.45 ^b
ASI Benevolent	2.96(.73)	1.09–4.91 ^b
EPSM	1.33(.46)	1–3.36 ^a
Covariates		
Age	37.79(9.42)	19–63
Years of Service	11.44(8.27)	0–39

Note: Gender and Past Experience are binary and thus excluded from these descriptive statistics.

An 'a' superscript denotes a possible range of 1–7, a 'b' superscript denotes a possible range of 1–6.

3.11 When a man urges his female partner to have sex, this cannot be called rape (M = 3.07); When politicians deal with the topic of rape, they do so mainly because this topic is likely to attract the attention of the media (M = 4.36); The discussion about sexual harassment on the job has mainly resulted in many a harmless behaviour being misinterpreted as harassment (M = 3.18); Although the victims of armed robbery have to fear for their lives, they receive far less psychological support than do rape victims (M = 4.16); Nowadays, the victims of sexual violence receive sufficient help in the form of women's shelters, therapy offers, and support groups (M = 3.86).

Contrastingly, the following items generated mean scores of lower than 2: Once a man and a woman have started 'making out', a woman's misgivings against sex will automatically disappear (M = 1.6); If a woman invites a man to her home for a cup of coffee after a night out this means that she wants to have sex (M = 1.95); Any woman who is careless enough to walk through 'dark alleys' at night is partly to be blamed if she is raped (M = 1.43); When a woman starts a relationship with a man, she must be aware that the man will assert his right to have sex (M = 1.61); When defining 'marital rape', there is no clear-cut distinction between normal conjugal intercourse and rape (M = 1.87); Instead of worrying about alleged victims of sexual violence society should rather attend to more urgent problems, such as environmental destruction (M = 1.6).

Hierarchical regression analyses

Data for each questionnaire was assessed for normality, skewness, and kurtosis and prior to analyses, appropriate assumptions were assessed. Firstly, the size and random nature of the sample assured the independence of residual scores. Furthermore, the Mahalanobis, Cook's, and leverage distances were examined to identify multivariate outlier cases within the sample, highlighting no causes for adjustment. This generated a sample of 912 officers, providing substantial statistical power given the scope of this model (Tabachnick & Fidel, 2001). The assumption of singularity was also met, highlighting that the explanatory variables did not exhibit perfect correlations and whilst there was some evidence of correlation across the independent variables (correlation coefficients are provided in Table 3), none were high and collinearity diagnostics were all within accepted limits (Hair, Black, Babin, & Anderson, 2010). Residual

Table 2. Item-by-item mean scores for the outcome variable.

Question	Mean	Median	Range
1. When it comes to sexual contacts, women expect men to take the lead	3.20 _b	3	1–7
2. Once a man and a woman have started 'making out', a woman's misgivings against sex will automatically disappear	1.60 _b	1	1–6 _c
3. A lot of women strongly complain about sexual infringements for no real reason, just to appear emancipated	2.31	2	1–7
4. To get custody for their children, women often falsely accuse their ex-husband of a tendency towards sexual violence	2.99	3	1–7
5. Interpreting harmless gestures as 'sexual harassment' is a popular weapon in the battle of the sexes	2.98	3	1–7
6. It is a biological necessity for men to release sexual pressure from time to time	3.02 _b	2	1–7
7. After a rape, women nowadays receive ample support	3.72 _a	4	1–7
8. Nowadays, a large proportion of rapes is partly caused by the depiction of sexuality in the media as this raises the sex drive of potential perpetrators	2.63	2	1–7
9. If a woman invites a man to her home for a cup of coffee after a night out this means that she wants to have sex	1.95 _b	1	1–7
10. As long as they don't go too far, suggestive remarks and allusions simply tell a woman that she is attractive	3.11 _b	3	1–7
11. Any woman who is careless enough to walk through 'dark alleys' at night is partly to be blamed if she is raped	1.43 _b	1	1–7
12. When a woman starts a relationship with a man, she must be aware that the man will assert his right to have sex	1.61 _b	1	1–7
13. Most women prefer to be praised for their looks rather than their intelligence	2.86	3	1–7
14. Because the fascination caused by sex is disproportionately large, our society's sensitivity to crimes in this area is disproportionate as well	2.98	3	1–7
15. Women like to play coy. This does not mean that they do not want sex	2.88	3	1–7
16. Many women tend to exaggerate the problem of male violence	2.18	2	1–6 _c
17. When a man urges his female partner to have sex, this cannot be called rape	3.07 _b	3	1–7
18. When a single woman invites a single man to her flat she signals that she is not averse to having sex	2.30	2	1–7
19. When politicians deal with the topic of rape, they do so mainly because this topic is likely to attract the attention of the media	4.36 _a	5	1–7
20. When defining 'marital rape', there is no clear-cut distinction between normal conjugal intercourse and rape	1.87 _b	1	1–7
21. A man's sexuality functions like a steam boiler – when the pressure gets too high, he has to 'let of steam'	2.27	2	1–7
22. Women often accuse their husbands of marital rape just to retaliate for a failed relationship	2.40	2	1–7
23. The discussion about sexual harassment on the job has mainly resulted in many a harmless behaviour being misinterpreted as harassment	3.18 _b	3	1–7
24. In dating situations the general expectation is that the woman 'hits the brakes' and the man 'pushes ahead'	2.66	2	1–7
25. Although the victims of armed robbery have to fear for their lives, they receive far less psychological support than rape victims	4.16 _b	4	1–7
26. Alcohol is often the culprit when a man rapes a woman	2.88	3	1–7
27. Many women tend to misinterpret a well-meant gesture as a 'sexual assault'	2.35	2	1–7
28. Nowadays, the victims of sexual violence receive sufficient help in the form of women's shelters, therapy offers, and support groups	3.86 _a	4	1–7
29. Instead of worrying about alleged victims of sexual violence society should rather attend to more urgent problems, such as environmental destruction	1.60 _b	1	1–7
30. Nowadays, men who really sexually assault women are punished justly	2.68	2	1–7

Note: An 'a' subscript notes an item mean that is greater than the English student validation sample by Gerger et al. (2007). a 'b' subscript, denotes a lower mean than the student sample.

A 'c' subscript notes the possible range was 1–7. If not specified, the full range was used for that variable.

output and scatter plots indicated the assumptions of normality, linearity, and homoscedasticity had also been met (Hair et al., 2010).

A hierarchical multiple regression was conducted to examine the contributions of the predictor variables on the outcome. The demographic predictor variables: gender, officer age, years of service, and officer training, were entered in the first block of the regression as control variables. Some of these categorical variables were dichotomised (i.e. each had a

Table 3. Correlations: covariates and predictors.

	1	2	3	4	5	6	7	8
1. AMMSA	–							
2. Gender	0.11***	–						
3. Age	–0.02	–0.13***	–					
4. Years of Service	0.02	–0.11***	0.75***	–				
5. Past Experience	0.07*	0.18***	0.1***	0.17***	–			
6. HTWS	0.49***	0.12***	–0.09**	–0.05 [†]	0.02	–		
7. ASI Hostile	0.61***	–0.17***	–0.04	–0.01	0.01	0.56***	–	
8. ASI Benevolent	0.35***	–0.29***	0.02	–0.03	–0.01	0.18***	0.47***	–
9. EPSM	0.36	–0.10***	–0.06*	–0.05 [†]	0.01	0.26***	0.32***	0.26***

Note: Categorical variables included for complete regression output only.

* $p < .05$; ** $p < .01$; *** $p < .001$; [†] $t < .08$ (trend).

single reference category, gender = 1 – male, and training = 0 non-SOIT trained), and further preparation of dummy variables was not necessary. Attitudinal predictor variables: hostility towards women, ambivalent sexism (hostile), ambivalent sexism (benevolent), and the relationship between power and sex, were entered in the second block. The factors entered into block one were therefore fixed, non-malleable constructs, while those entered in block two represented broader attitudinal constructs which may be subject to variation and change (e.g. through training and intervention). Regression statistics are reported in Table 4.

Analyses revealed a significant contribution to the explained variance by the first block of variables within the model, R^2 , $F(4, 907) = 5.53$, $p < .001$, accounting for 2% of the variance in AMMSA. Examination of individual variable contributions in block one reveals that both officer gender ($B = -.21$, $t(908) = -3.88$, $p < .001$) and officer specialist training ($B = .21$, $t(908) = 2.62$, $p < .01$) significantly predicted RMA. Specifically, officers who were male exhibited 0.21 more units of RMA than female participants, while those who were not SOIT trained exhibited 0.21 more units of RMA (see unstandardised B coefficients in Table 4). Officer age and years of service did not contribute to the model.

Introducing the attitudinal variables in block two of the model explained an additional 42% of variance in AMMSA with a corresponding significant change in R^2 , $F(4, 903) =$

Table 4. Multiple regression on rape myth acceptance in metropolitan police.

	Variables	B(SE)	β	t	R	R^2	Adjusted R^2	ΔR^2
Block 1	Covariates				0.15	0.02	0.02	
	Gender	–0.21(.06)	–0.13	–3.88***				
	Age	–0.008(.004)	–0.10	–1.915				
	Years of Service	–0.006(.01)	0.07	1.30				
	Past Experience (SOIT/non-SOIT)	0.21(.08)	0.09	2.62**				
	Intercept	3.19(.15)		21.20***				
Block 2	Covariates + Predictors				0.66	0.44	0.44	0.42
	Gender	–0.06(.05)	–0.04	–1.41				
	Age	–0.002(.003)	–0.03	–0.77				
	Years of Service	0.005(.004)	0.05	1.41				
	Past Experience (SOIT/non-SOIT)	0.14(.06)	0.06	2.26*				
	HTWS	0.21(.03)	0.22	6.90***				
	ASI Hostile	0.36(.03)	0.39	11.24***				
	ASI Benevolent	0.09(.03)	0.08	2.71**				
	EPSM	0.28(.04)	0.16	5.99***				
	Intercept	0.72(.16)		4.42***				

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$.

88.54, $p < .001$; and an overall model explaining 44% of AMMSA scores in MPS officers (R^2 , $F(8, 903) = 167.48$, $p < .001$). With this addition, officer gender no longer provides a significant contribution to the explained variance in AMMSA. Officer specialist training continued to predict AMMSA, though this effect was reduced ($B = .14$, $t(904) = 2.26$, $p < .05$) with the absence of SOIT training resulting in a 0.14-unit increase in AMMSA. Importantly, each of the attitudinal predictor variables added in this block significantly and substantially explained variance in AMMSA scores. Hostility towards women ($B = .21$, $t(904) = 6.90$, $p < .0001$), ambivalent sexism (hostile) ($B = .36$, $t(904) = 11.24$, $p < .0001$), ambivalent sexism (benevolent) ($B = .09$, $t(904) = 2.71$, $p < .01$), and the relationship between power and sex ($B = .28$, $t(904) = 5.99$, $p < .0001$), all resulting in significant increases in rape myth acceptance.

Discussion

This study examined the predictive contributions of several key demographic and attitudinal variables to police officers' rape myth acceptance, utilising a large U.K. police sample. This study is the first of its kind to systematically examine the contributions of officer gender, officer age, years of service, officer training, and hostility towards women, ambivalent sexism, and explicit power-sex beliefs to rape myth acceptance within one model, thereby highlighting the broader attitudinal and demographic context of RMA in U.K. police officers.

Results from this study demonstrated that whilst both demographic and attitudinal factors significantly predicted RMA, attitudinal variables accounted for a substantially greater proportion of the variance. These findings add important new context to the existing literature on rape myth acceptance in police officers, specifically on the cognitive framework in which RMA operates. Importantly, these findings suggest that broader attitudinal constructs explain a far greater proportion of variance in RMA, and may, therefore, represent a more efficient and effective focus for intervention, and in informing the evidence-base on which specialist and non-specialist officer training is built. Specifically, greater knowledge and awareness of attitudinal antecedents is of particular utility in highlighting the broader beliefs that support the role of RMA in informing officers' overall opinions and perception of sexual assault victims (Campbell & Johnson, 1997; Feldman-Summers & Palmer, 1980; Ullman & Townsend, 2007) as well as their perceived credibility (Brownmiller, 1975; Venema, 2016a).

Demographic predictors

Commensurate with previous work examining both non-police samples (Gerger et al., 2007; Muir et al., 1996; Suarez & Gadalla, 2010; Whatley, 1996) and police samples (Page, 2007, 2008b), being a male was significantly predictive of increased acceptance of rape myths. This supports previous assertions that inequality perpetuates rape myths; that is, a male-dominant society would probably justify rape and blame the victims (Suarez & Gadalla, 2010). Specialist training was also a significant contributor to the explained variance in RMA. This supports some previous work demonstrating lower RMA in specially trained officers (see Lee et al., 2012), but challenges other studies which highlight no significant differences between those who have received specialist

training and those who have not (Goodman-Delahunty & Graham, 2011; Sleath & Bull, 2012), and work which actually demonstrates a negative effect of specialist training on judgements of perpetrator responsibility (in acquaintance cases, where the victim resists late; Hine & Murphy, 2017). Findings for officer age also challenge existing research (e.g. Suarez & Gadalla, 2010), as older participants were more likely to demonstrate higher levels of RMA than younger participants, whilst years of service did not contribute significantly to the explained variance, a finding supported by previous work (Goodman-Delahunty & Graham, 2011). Taken together, these results demonstrate that some key demographic factors (specifically officer sex and officer training) serve to significantly predict rape myth acceptance in U.K. police officers, whilst others do not. This provides valuable evidence as to which officers may demonstrate higher RMA, and therefore may engage in more negative interactions with victims (although this requires further investigation). However, it must be noted that, whilst significant in their contribution, demographic factors only explained 2% of the variance in RMA, and that further research is needed to investigate these relationships.

Attitudinal predictors

The attitudinal variables in this study explained a substantially greater proportion of the variance in RMA (42%). Specifically, hostility towards women, ambivalent sexism (hostile and benevolent), and the relationship between power and sex were all significantly predictive of RMA. These findings echo previous literature identifying attitudes such as traditional gender-role beliefs, male dominance, and negative attitudes towards women as correlated, and indeed predictive of RMA in both general populations (Anderson et al., 1997; Aosved & Long, 2006; Forbes et al., 2004; Lonsway & Fitzgerald, 1994, 1995; Suarez & Gadalla, 2010) and police officers (Page, 2008b). Furthermore, the significant predictive relationship between hostile and benevolent sexism and RMA in officers highlights the impact of both antagonistic sexist attitudes towards women, as well as what may be considered chivalrous beliefs (Glick & Fiske, 1996), where in both cases the ultimate outcome is dominance over a weaker group, through differential manifestations (Glick et al., 2000). Belief in the relationship between power and sex also provides support for the importance of sexually aggressive beliefs in supporting RMA, in line with work by Bargh et al. (1995), and Chapleau and Oswald (2010). These findings, therefore, add to the developing literature purporting that RMA is part of a learned system, in which sex is associated with power, and which may include socialised gender roles and dominance (Zurbriggen, 2000).

Interesting shifts also take place in the contribution of the demographic factors on introduction of the attitudinal variables. Notably, the suppression of the gender variable, which indicates that being male ceases to significantly contribute to RMA once attitudes are introduced, signifying that the attitudes measured explain the effects of gender in predicting RMA. This again makes sense in light of the observation that many of these attitudes incorporate elements of gender role socialisation, and gender role relations. Meanwhile, the specialist training effect (i.e. the noted decrease in RMA as a result of experiencing specialist rape training) remains. This potentially suggests that aspects of the training and/or the experience of the role of a SOIT brings about decreases in RMA, and that this training effect is not explained by the attitudes measured.

Implications

The results outlined above therefore provide robust support for the notion that rape myth acceptance does not exist in isolation; rather that broader negative and sexist attitudes provide important context for the development and maintenance of RMA as a cognitive framework (Temkin & Krahé, 2008). Furthermore, these findings demonstrate that such attitudinal relationships exist in police officers, who have routinely been demonstrated as key to the response and service that victims will experience (Sleath & Bull, 2012), and whose RMA has been linked to behavioural outcomes and judgements (Sleath & Bull, 2017). Taken together, results from this study support the idea that efforts to train, raise awareness, and address RMA in police officers may need to consider the broader attitudinal context of RMA, as well as some key demographic factors.

Whilst some positive examples of training programmes exist (Lee et al., 2012), most studies suggest that attitudinal intervention (Lonsway et al., 2001; Muram et al., 1995) or provision of specialist training (Goodman-Delahunty & Graham, 2011; Sleath & Bull, 2012) is ineffective at changing officers' subscription to rape myths. The findings from this study provide further context to the complexity of, and resistance to, attitude change (Rozee & Koss, 2001), and the noted short-term nature of any changes that rape-prevention and RMA awareness programmes do bring about (Anderson & Whiston, 2005; Flores & Hartlaub, 1998). They also allude to the possible mechanisms behind the maintenance of stereotypes and prejudices towards rape victims, which abound after more than three decades of awareness of RMA as an issue (Shechory & Idisis, 2006). Crucially, it can now be suggested that, where training is in place to bring about change in operations or attitudes, considering the broader cognitive/attitudinal context of rape myths is crucial, rather than focussing RMA as the sole issue. This is particularly important in the context of numerous policing reviews, such as the Dame Elish Angiolini review (2015), which highlight the need to better understand interactions between officers and victims during the 'make or break' reporting stage of the investigation, stating that 'first responders should receive adequate training to ensure understanding of the complexities of rape reporting and recording to ensure that all officers understand the rape myths and behaviours and respond to complainants in an objective and compassionate manner' (p. 153).

Limitations and future research directions

There are a number of limitations evident in this study. First, all participants were from the Metropolitan Police Service, representing only one, albeit the largest, of the 43 police forces present in England and Wales. Whilst this force is demographically similar to other police forces within the U.K. (ONS, 2015), this service is responsible for a larger, more densely packed population, with substantially more ethnic and demographic diversity than most within England and Wales, and over 20% of all rape cases within the U.K. are recorded by this force (ONS, 2013). Regional variability in reporting, attrition, and conviction of rape across England and Wales (Horvath & Brown, 2009) must, therefore, be acknowledged, as well as the impact this may have on the operational prioritisation of resources across policing services. In particular, the rape caseload within this region may contribute to an increased salience of this type of crime in terms of officer awareness

and reactions. Future research should seek to examine the extent to which factors such as higher caseload may function similarly to experience in therapists, where length of experience working directly with this client group increased RMA, potentially through desensitisation and compassion fatigue (Suarez & Gadalla, 2010). In doing so, broader comparative work with officers from other forces (e.g. including urban/rural, high rape caseload/low rape caseload comparisons) may give urgently needed insight into the role of exposure in these cases.

Secondly, despite significant efforts to assure officers that their responses were anonymous and confidential, social desirability may have played a role in the responding of participants, as officers may have been concerned about how their data may be used and provided answers in line with the expectations of their superiors. This is particularly salient in studies using police officer populations, due to the strongly top-down, authoritarian accountability structures within these organisations (Hall, Hall, & Perry, 2016). The semi-controlled environment of requiring responses on an MPS computer may have exacerbated this concern to some extent, and future research should seek to create greater consistency of environment for participants. However, the distribution of the data (specifically the lack of floor effects) suggest that this was not a particular concern.

Finally, the cross-sectional design of the study, and the sole measurement of attitudes (as opposed to officer judgements or behaviours), make it difficult to establish the extent to which these attitudinal findings translate directly into behaviours, or indeed directly influence interactions with victims, or the trajectories and outcomes of specific cases. However, previous research on case outcome probabilities (e.g. Hohl & Stanko, 2015) and officer judgements (e.g. Hine & Murphy, 2017) suggests that rape myths do provide an important framework for the behaviour of officers. As such, these findings give some vital insight into the beliefs that may help inform officer's acceptance of rape myths, and, in turn, their actions towards victims. Future research should build on this work, as well as the work of Page (2008), Rich and Seffrin (2012), Smith, Wilkes, and Bouffard (2016), and Venema (2016b), to offer a fuller picture of the role that attitudes and beliefs may play in officers' perceptions of rape victims, and perpetrators, as well as the role of behaviours during reporting and throughout the investigative process. Additionally, an examination of how these manifest in reactions to victims and the role this has for victim experiences may be a significant area of exploration, particularly given the potential impact on engagement, which may undermine investigation, case-building, and ultimately the progression of cases through to prosecution. It is also vital to develop a broader, comparative base to this data. Further examination of the modelling of these predictors of RMA throughout the broad population, as well as other populations within the criminal justice system, would help identify the role of underpinning attitudes, beliefs, and demographic factors that are predictive of RMA universally and/or within specific populations. This may illuminate specific evidence-based training needs for other groups within the criminal justice system (e.g. jurors, lawyers, and judges).

Conclusion

Despite evidence provided by this and other studies that officers generally demonstrate low levels of rape myth acceptance (Sleath & Bull, 2017), significant subscription to certain myths in a small minority of officers is observed. Importantly, RMA has been

shown to have a significant impact on victim experience and case trajectories, and such attitudes therefore represent a significant barrier to justice and provide subjectivities that may impact on the victim experience. The present study adds important additional context to the understanding of such beliefs by demonstrating that broader attitudes related to hostility towards women, sexist beliefs, and the relationship between power and sex that serve to reliably predict rape myths in police officers. Such results therefore suggest that considering RMA in isolation may constitute a limited and fruitless endeavour, particularly in attempts at attitude change.

A significant review of training, particularly in reference to the potentially neglected attitudes, beliefs, and biases highlighted in this study, is therefore evidently necessary to fully capture the extent, nature, and manifestation of RMA and its consequences. Furthermore, such programmes should take into account the impact of such beliefs throughout the process of investigation; from interaction with victims, to evidence gathering and investigation and, as importantly, within police culture, and indeed sub-cultures. Crucially, any evidence-based training should encourage critical, reflective awareness of the beliefs and subjectivities officers hold and the impact these have on the judgments they may make regarding victims and cases. A mindful consideration of how these subjectivities and attitudes manifest in the context of the downstream orientation phenomenon noted by Frohmann (1997), and the development of a reflective awareness of this within officers working proximal to rape may also be of significant benefit.

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